

**REMARKS**

Claims 1, 2, 4-7, 18-24, 29, 32-33, 35, 37-42 are pending. No new matter has been added.

**Priority**

The Examiner has asserted that the present application was not filed within twelve months of the filing date of the priority document (Application No. 60/450797). Applicant respectfully disagrees with this assertion. The priority document was filed on February 28, 2003. One year from that date, February 28, 2004, fell on a Saturday of a leap year, the following Monday was March 1, 2004, which is the filing date of the present application.

This issue was raised with the Examiner in a telephone interview on June, 17, 2006, in which the Examiner acknowledged that the present application was filed in a timely fashion so as to claim priority back to February 28, 2003.

Accordingly, the present application can claim priority back to the filing date of the priority document, Application No. 60/450797, filed on February 28, 2003.

**Claim Rejections – 35 USC § 112**

Claims 39-42 are rejected under 35 U.S.C. § 112, section paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention and incomplete for omitting essential steps, such omission amounting to a gap between the steps. Specifically, the Examiner asserts claims 39-42 lack method steps to further limit independent claim 32. As such the Examiner has withdrawn claims 39-42. Applicant respectfully traverses the rejection and withdrawal of claims.

Regarding the Examiner's withdrawal of the claims, in a September 12 telephone interview with the Examiner, the Examiner clarified that the claims were not withdrawn.

Regarding the indefiniteness of the claims, claims 39-42 depend from claim 32 and as such incorporate each and every element of claim 32. Claim 32 sets forth a method performed by a mechanical seal. The structure of the mechanical seal is recited in the preamble of claim 32 to provide support for the inter-workings of the mechanical seal in performance of the method. That is, in claim 32, the recited structure of the mechanical seal provides support for the operation set forth in the method. Claims 39-42 set forth limitations for the structure of the mechanical seal and as such add limitations to the recited method as the method relies on the recited structure.

Accordingly, Applicants respectfully submit that claims 39-42 are not indefinite or omitting essential steps under 35 U.S.C. 112, second paragraph. As such, Applicants kindly request that the rejection of the claims be withdrawn and that the claims allowed to issue.

#### **Claim Rejections – 35 USC § 102**

Claims 1, 2, 4, 5, 18-20, 23, 29, 32, 33, 35, 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark et al. (U.S. Patent No. 6,913,520). Claims 1, 2, 4-8, 18-24, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Azibert et al. (US Patent No. 6,935,632). Applicant respectfully traverses the rejections.

#### **35 U.S.C. 102(b) Rejection**

Clark fails to disclose each and every element of claims 1 and 32. Specifically, Clark fails to disclose a shuttle member as set forth in claims 1 and 32. What the Examiner has indicated as a shuttle member (e.g. 202) in Figure 2 of Clark is actually an O-ring. An O-ring is not the same as the shuttle member of the present invention. Indeed, the shuttle member of the present invention is designed to replace and solve the problems of the O-ring configuration. As set forth on page 2 in the Background of the Invention:

Prior double-balanced mechanical seal assemblies have significant drawbacks. First, the piston areas in prior double-balanced mechanical seal assemblies are dependent upon the size and configuration of the O-rings. As the inner and outer diameters of the O-rings define the balance pressure points for the respective fluids, the radial contact dimension of the seal faces must be sufficiently large to account for the thickness of the O-rings. This limits the design of the seal faces for which minimum contact area is desired to reduce heat generation.

An additional drawback of double-balanced mechanical seal assemblies of the prior art is that the double-balanced seal does not operate efficiently under reverse pressure conditions. Under reverse pressure conditions, the O-rings slide in their grooves to achieve sealing. Furthermore, the process fluid, which may be dirty and include contaminants, causes dirt and other particles to get caught in the sliding O-ring interface, which causes wear and O-ring hang-up over time, thereby negatively impacting seal performance.

Thus Clark discloses the previous double-balanced seal assembly using O-rings. Clark does not disclose the shuttle member of the present invention. Indeed the distinction is further apparent in view of dependent claims 6 and 7 wherein the carrier element of the shuttle member comprises a groove for a sealing element such as an O-ring. In fact, the specification, in discussing the shuttle member, states "According to a preferred embodiment, the shuttle element as used and defined herein is not intended to cover a member or device that includes only an O-ring." (See last paragraph of page 6 onto page 7). Thus the shuttle member of the present invention is distinctly different from the O-ring disclosed in Clark. As such Clark fails to disclose each and every element of claims 1 and 32.

Claims 2, 4, 5, 18-20, 23, and 29 depend from claim 1 and claims depend from claim 32. As such claims 2, 4, 5, 18-20, 23, 29 and 33, 35, 37, 38 incorporate each and every element of claims 1 and 32 respectively. Thus, since Clark fails to disclose each and every element of claims 1 and 32, Clark also fails to disclose each and every element of claims 2, 4, 5, 18-20, 23, 29, 33, 35, 37, and 38.

In light of the foregoing remarks, Applicants respectfully submit that claims 1, 2, 4, 5, 18-20, 23, 29, 32, 33, 35, 37 and 38 are not disclosed by Clark. Applicants therefore request the Examiner withdraw the rejections of claims 1, 2, 4, 5, 18-20, 23, 29, 32, 33, 35, 37 and 38 under 35 U.S.C. §102(b), and pass the claims to allowance.

#### 35 U.S.C. 102(e) Rejection

As discussed above, this application claims priority back to the filing date of the priority document, Application No. 60/450797, filed on February 28, 2003. As discussed in the previously filed response, on page 17 of Application No. 60/450797, specifically the paragraph

beginning on line 20, the application incorporates by reference the contents of the application having Attorney Docket No. 605 that was filed on the same day (February 28, 2003). Attorney Docket No. 605 is Application No. 10/376,415 which issued as U.S. Patent No. 6,935,632 (Azibert). Therefore, Azibert is not a proper 102(e) reference.


In light of the foregoing remarks, Applicants respectfully submit that claims 1, 2, 4-8, 18-24, and 29 are not anticipated by Azibert. Applicants therefore request the Examiner withdraw the rejections of claims 1, 2, 4-8, 18-24, and 29 under 35 U.S.C. §102(e), and pass the claims to allowance.

**CONCLUSION**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Dated: September 21, 2006

Respectfully submitted,

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